

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (Currently Amended) A data structure embodied in a tangible computer
2 readable medium for providing object level management of a document datastream in a print
3 system using tagged secondary resources, the data structure ~~including~~ comprising:
4 a mixed object document structure, wherein the mixed object document structure
5 further comprising:
6 a mapping structure; and
7 a page layout structure;
8 wherein the mapping structure includes at least one mapping structure for
9 reference identifying rendering a set of rendering control data as a secondary resource, and at
10 least one wherein the page layout structure includes an include object structure for
11 referencing, the include object structure signaling inclusion of an object identifying
12 rendering control data mapped in the mapping structure for use in rendering the object.

1 2. (Original) The data structure of claim 1 wherein a plurality of mapping
2 structures are provided.

1 3. (Original) The data structure of claim 2 wherein a plurality of include
2 object structures to an object reference the identified rendering control data.

1 4. (Original) The data structure of claim 1 wherein a plurality of include
2 object structures to an object are provided for referencing identified rendering control data.

1 5. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises source calibration parameters.

1 6. (Original) The data structure of claim 5 wherein the source calibration
2 parameters comprise a color profile.

1 7. (Original) The data structure of claim 5 wherein the source calibration
2 parameters comprise halftoning parameters.

1 8. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises text rendering parameters.

1 9. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises vector graphic rendering parameters.

1 10. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises image rendering parameters.

1 11. (Currently Amended) A method for providing object level management using
2 tagged secondary resources, comprising:

3 ~~mapping rendering control data for at least one object as a secondary resource;~~

4 ~~including at least one include structures for the at least one object that references the~~
5 ~~mapped rendering control data;~~

6 generating a mapping structure that includes at least one mapping reference

7 identifying a set of rendering control data as a secondary resource; and

8 generating a page layout structure that includes at least one include object structure,

9 the at least one include object structure signaling inclusion of an object identifying rendering

10 control data mapped in the mapping structure for use in rendering the object; and

11 printing a page ~~containing~~ according to the at least one include object structure, the at
12 least one object on the page being rendered according to the mapped rendering control data
13 identified by ~~for~~ the at least one object.

1 12. (Original) The method of claim 11 wherein the rendering control data
2 comprises source calibration parameters.

1 13. (Original) The method of claim 12 wherein the source calibration
2 parameters comprise a color profile.

1 14. (Original) The method of claim 12 wherein the source calibration
2 parameters comprise halftoning parameters.

1 15. (Original) The method of claim 11 wherein the rendering control data
2 comprises text rendering parameters.

1 16. (Original) The method of claim 11 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 17. (Original) The method of claim 11 wherein the rendering control data
2 comprises image rendering parameters.

1 18. (Currently Amended) A method for providing object level management for a
2 page using tagged secondary resources, comprising:

3 ~~determining whether rendering control data for an object is mapped;~~
4 ~~making the rendering control data for the object available in the printer;~~
5 ~~including the object that references the mapped rendering control data for the object;~~
6 ~~determining whether additional rendering control data is to be mapped;~~
7 ~~making additional rendering control data for additional objects available in the printer~~
8 ~~and including the additional objects that reference the additionally mapped rendering control~~
9 ~~data for the additional objects when it is determined that additional rendering control data is~~
10 ~~to be mapped;~~

11 ~~rendering objects in page according to mapped rendering control data for the objects;~~
12 and
13 ~~printing the page~~

14 determining whether a document datastream includes a mapping structure comprising
15 at least one mapping reference identifying a set of rendering control data as a secondary
16 resource; and

17 obtaining rendering control data identified by the at least one mapping reference for
18 access by the printer;

19 preparing a document for printing according to a page layout structure that includes at
20 least one include object structure, the at least one include object structure signaling inclusion
21 of an object identifying rendering control data mapped in the mapping structure for use in
22 rendering the object; and

23 printing a page according to the at least one include object structure, at least one
24 object on the page being rendered according to mapped rendering control data identified by
25 the at least one object.

1 19. (Original) The method of claim 18 wherein the rendering control data
2 comprises source calibration parameters.

1 20. (Original) The method of claim 19 wherein the source calibration
2 parameters comprise a color profile.

1 21. (Original) The method of claim 19 wherein the source calibration
2 parameters comprise halftoning parameters.

1 22. (Original) The method of claim 18 wherein the rendering control data
2 comprises text rendering parameters.

1 23. (Original) The method of claim 18 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 24. (Original) The method of claim 18 wherein the rendering control data
2 comprises image rendering parameters.

1 25. (Currently Amended) A system for providing object level management for a
2 page, comprising:

3 a print server for receiving an application datastream defining a document containing
4 objects for printing and creating a printer datastream that is specific to a destination printer
5 engine in order to integrate with the printer's specific capabilities and command set; and

6 a control unit for maintaining cached objects, the control unit further comprising a
7 raster image processor for rendering object according to commands provided by the print
8 server in the printer datastream;

9 wherein the application datastream ~~maps at least one set of rendering control data as a~~
10 ~~secondary resource and includes at least one object that references the at least one mapped~~
11 ~~set of rendering control data based upon a data structure in the application datastream that~~
12 ~~tags rendering control data to objects~~ comprises a mixed object document structure, wherein
13 the mixed object document structure further comprising:

14 a mapping structure; and

15 a page layout structure;

16 wherein the mapping structure includes at least one mapping-reference
17 identifying a set of rendering control data as a secondary resource, and wherein the page
18 layout structure includes an include object structure, the include object structure signaling
19 inclusion of an object identifying rendering control data mapped in the mapping structure for
20 use in rendering the object.

1 26. (Original) The system of claim 25 wherein the secondary resource is
2 shipped resident in the printer.

1 27. (Original) The system of claim 25 wherein the secondary resource is
2 downloaded by the print server based upon the mapping when the secondary resource is not
3 resident.

1 28. (Original) The system of claim 25 wherein the rendering control data
2 comprises source calibration parameters.

1 29. (Original) The system of claim 28 wherein the source calibration
2 parameters comprise a color profile.

1 30. (Original) The system of claim 28 wherein the source calibration
2 parameters comprise halftoning parameters.

1 31. (Original) The system of claim 25 wherein the rendering control data
2 comprises text rendering parameters.

1 32. (Original) The system of claim 25 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 33. (Original) The system of claim 25 wherein the rendering control data
2 comprises image rendering parameters.

1 34. (Currently Amended) An article of manufacture comprising a program
2 storage medium readable by a computer, the medium tangibly embodying one or more
3 programs of instructions executable by the computer to perform a method for providing
4 object level management for a page, the method comprising:
5 ~~mapping rendering control data for at least one object as a secondary resource;~~
6 ~~including at least one include structure for the at least one object that references the~~
7 ~~mapped rendering control data;~~
8 generating a mapping structure that includes at least one mapping reference
9 identifying a set of rendering control data as a secondary resource; and
10 generating a page layout structure that includes at least one include object structure,
11 the at least one include object structure signaling inclusion of an object identifying rendering
12 control data mapped in the mapping structure for use in rendering the object; and
13 printing a page ~~containing~~ according to the at least one include object structure, the at
14 least one object on the page being rendered according to the mapped rendering control data
15 identified by ~~for~~ the at least one object.

1 35. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises source calibration parameters.

1 36. (Original) The article of manufacture of claim 35 wherein the source
2 calibration parameters comprise a color profile.

1 37. (Original) The article of manufacture of claim 35 wherein the source
2 calibration parameters comprise halftoning parameters.

1 38. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises text rendering parameters.

1 39. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises vector graphic rendering parameters.

1 40. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises image rendering parameters.

1 41. (Currently Amended) An article of manufacture comprising a program
2 storage medium readable by a computer, the medium tangibly embodying one or more
3 programs of instructions executable by the computer to perform a method for providing
4 object level management for a page, the method comprising:
5 ~~determining whether rendering control data for an object is mapped;~~
6 ~~making the rendering control data for the object available in the printer;~~
7 ~~including the object that references the mapped rendering control data for the object;~~
8 ~~determining whether additional rendering control data is to be mapped;~~
9 ~~making additional rendering control data for additional objects available in the printer~~
10 ~~and including the additional objects that reference the additionally mapped rendering control~~
11 ~~data for the additional objects when it is determined that additional rendering control data is~~
12 ~~to be mapped;~~
13 ~~rendering objects in page according to mapped rendering control data for the objects;~~
14 and
15 ~~printing the page~~
16 determining whether a document datastream includes a mapping structure comprising
17 at least one mapping reference identifying a set of rendering control data as a secondary
18 resource; and
19 obtaining rendering control data identified by the at least one mapping reference for
20 access by the printer;
21 preparing a document for printing according to a page layout structure that includes at
22 least one include object structure, the at least one include object structure signaling inclusion

23 of an object identifying rendering control data mapped in the mapping structure for use in
24 rendering the object; and
25 printing a page according to the at least one include object structure, at least one
26 object on the page being rendered according to mapped rendering control data identified by
27 the at least one object..

1 42. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises source calibration parameters.

1 43. (Original) The article of manufacture of claim 42 wherein the source
2 calibration parameters comprise a color profile.

1 44. (Original) The article of manufacture of claim 42 wherein the source
2 calibration parameters comprise halftoning parameters.

1 45. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises text rendering parameters.

1 46. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises vector graphic rendering parameters.

1 47. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises image rendering parameters.